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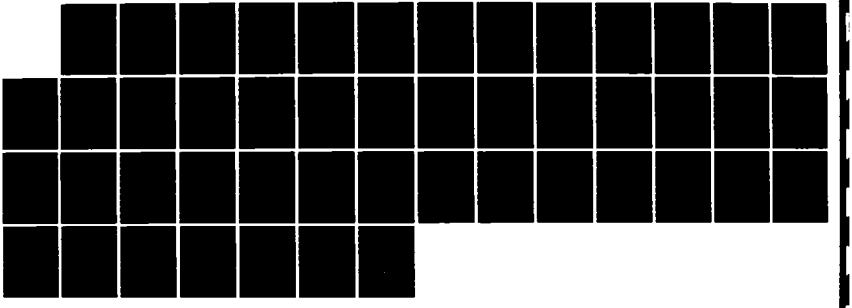

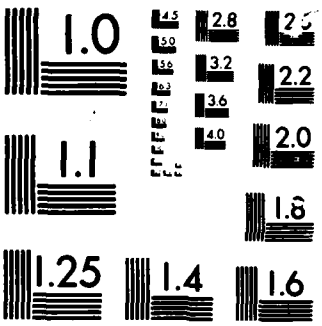

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Soviet Attack Helicopters and Their Implications for U.S. Army Division Operations

by

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Fort Leavenworth, Kansas

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This monograph is a historically based analysis of Soviet and U.S. attack helicopter development since 1962. Significant and recent changes in Soviet attack helicopter organization and employment are presented.

Among the many conclusions drawn from this analysis are: rapid Soviet progress in development and employment of tactical attack helicopters has surprised western observers; the average U.S. Army officer is not aware of the Soviet progress; U.S. divisional doctrine does not address the impact of the Soviet attack helicopter; and divisions are not training their forces to counter the Soviet threat.

This monograph concludes that doctrinal and training changes which address the Soviet attack helicopter threat must be quickly developed and implemented. Failure to do so may have a negative impact on future U.S. division tactical operations against Soviet forces.

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SECTION I

INTRODUCTION

Should the Soviets attempt an invasion of Western Europe in the near future, they apparently intend to defeat NATO forces in the Central Region without ever having to resort to the use of nuclear weapons. To accomplish this goal, the Soviets believe that they must mass overwhelming conventional forces against the forward defenses of NATO. Successful penetrations will be exploited rapidly and violently to operational and strategic depths and total victory achieved by the seizure of key political and industrial centers of a divided and unprepared Europe. Preparation for this strategy is reflected in the continued Soviet buildup of huge conventional ground forces, their resurrection of forward detachments and the operational maneuver group (OMG), continued improvement of conventional weapons systems, full mechanization of their conventional forces, major changes within their highest command structure facilitating a rapid transition to wartime command and control headquarters, and the realignment of the Group of Soviet Forces Germany (GSFG) to station combat units as near their wartime attack positions as possible.(1)

Assuming that the above assessment of Soviet/Warsaw Pact strategy is correct, then what are the essential

changes to Soviet tactical doctrine that must be accomplished which will enable the Soviets to reach their doctrinal goals? Quite logically, many tactical changes will be required; however, one exceptionally important change, which has been observed in recent years, demands detailed examination. That change is the decentralization of Soviet Air Force helicopters to the division and army level for improved responsiveness in tactical-level combined arms operations.

An attack helicopter regiment has been placed under the operational control of the combined arms and tank army commander while a general purpose squadron is under the operational control of each motorized rifle and tank division commander. In their usual straightforward approach to war, the Soviets view the attack helicopter, at the tactical level, as a fast, mobile and lethal war fighting system which can help achieve and maintain high tempo offensive operations. Chris N. Donnelly, head of the Soviet Studies Research Center at the Royal Military Academy Sandhurst, sums up the Soviet view on attack helicopters in these words: "The Soviet Army no longer thinks of the all-important land battle in purely ground terms --- it is now a three dimensional battle. . . the air element. . . at the tactical level, provided by the helicopter."(2) Viktor Suvorov, an expatriate Soviet officer adds, "Soviet commanders believe that to all intent and purpose the helicopter is a tank." (3)

As the Soviet attack helicopter becomes an important,

even vital, part of Soviet division and army operations, it is imperative that the employment doctrine, missions, tactics, capabilities and limitations be understood by U.S. forces. Soviet attack helicopter employment, if not immediately addressed, might prove a decisive factor in future Soviet combined arms operations. Current U.S. Army doctrine fails to portray the Soviet attack helicopter as a vital element in a Soviet combined arms operation at division level. Therefore, with few exceptions, our tactical units do not adequately train to defeat attack helicopter-supported Soviet combined arms operations.

This paper will examine the impact of the Soviet attack helicopters on U.S. Army division combat operations in a mid-to-high intensity environment. It begins with a historical discussion of Soviet and U.S. attack helicopter development and employment from 1962 to the present. Then, it analyzes the current Soviet attack helicopter capability and the potential impact it will have on U.S. Army division close, rear and deep operations. Finally, it reviews U.S. Army division and brigade doctrinal manuals and selected elements of current tactical level education and combat training programs to determine if our forces are prepared to counter the new Soviet attack helicopter threat. The paper concludes with some fundamental recommendations which might serve as the basis for development of sound tactical doctrine that will enable U.S. forces to defeat Soviet attack helicopter-supported combined arms operations.

In an attempt to develop a paper that can be widely

disseminated and readily used by all interested parties, classified material has not been used. Consequently, some omissions of available, supporting documentation may occur. A wealth of classified information is available to the interested reader who wishes to investigate further the capabilities of Soviet attack helicopters. Defense Intelligence Agency reports and summaries are an example of helpful documents. Additionally, although the focus of this paper is on the European battlefield, it should have worldwide applicability.

SECTION II

HISTORICAL PERSPECTIVE 1962 - 1985

As one recent student of Soviet aviation development has written,"Two significant events have occurred to expedite the integration of the helicopter into the Soviet's combat forces: first, the U.S. development of the airmobile concept, the demonstration of its tactical value in Vietnam, and the continued refinement of airmobile/air assault operations by the U.S. Army; and second, technological advances which have reduced the vulnerability of the helicopter and increased its survivability and combat power."(3) Major Charles B. Cook's 1982 observations in his excellent masters thesis, completed while attending the U.S. Army Command and General Staff College, are certainly on the mark. Three other events; however, also motivated the Soviets to concentrate enormous efforts on the development of attack helicopters. The first event was the 1973 Arab-Israeli War. In this war, the ability to destroy tanks using attack helicopter-launched antitank guided missiles, on a mid intensity battlefield, confirmed recent U.S. experience in Vietnam. The second event has been the continuing war in Afghanistan. This war has provided the Soviets with a testing ground for further development of attack helicopter tactics and weapon systems. Finally, the Soviets remain committed to match U.S. technological

advances. They will counter U.S. development with their own new systems.

Serious development of U.S. armed helicopters began in 1962. At that time, the Howze Board was examining the U.S. Army's concepts on battlefield mobility. One of the many tests conducted by the board included the use of utility helicopters to move combat units on the battlefield. Responsive protection for the airmobile force demanded an escort by armed helicopters. In 1965, the Vietnam conflict further encouraged the Army to modify the Bell UH-1, Huey, as an armed helicopter. The AH-1 Cobra resulted, and this "interim" attack helicopter was rushed into production.

Design work began in 1965 on an all-weather attack helicopter, the AH-56 Cheyenne. The Cheyenne project was an aggressive project which seemed destined to failure from the very beginning. Its potential on the battlefield appeared to be too revolutionary for many. Thus, it failed to gain adequate governmental and U.S. Army combat branch support. Cost over-runs, accidents and temperamental, sophisticated systems all contributed to the failure of the Cheyenne program.

Meanwhile, the AH-1 served in Vietnam with distinction. For more than a decade, it inspired fear in the hearts of enemy soldiers as it provided fire support for airmobile operations and units in contact. Numerous modifications occurred over the years leading to the appearance of the AH-1S TOW Cobra in the early 1970's. It was this system which first demonstrated that enemy armor could be

decisively engaged by a helicopter launched antitank guided missile [ATGM]. Ironically, as the Cobra weapons and fire control systems evolved, the ability of the helicopter to carry useful fuel and ammunition loads steadily decreased. The current model, the AH-1S modernized Cobra, is a very sophisticated yet underpowered helicopter "incapable of meeting . . . [its] full mission requirements in most regions of the world"(5) The Cobra, which started as an interim solution for the Cheyenne, has reached the end of its combat utility. Since it is underpowered, it cannot maintain the tempo of the modern battlefield or perform air-to-air defensive maneuvers. A new night vision system, the C-Nite, will be installed on the Cobra to provide it with the ability to fight at night. The system weighs approximately 170 pounds, again reducing the munitions delivery capability of the Cobra.

The Soviets watched the Cheyenne wither on the vine in the mid-60's as the Cobra performed beyond expectations in Vietnam. They responded with their own combat helicopter in 1971, the MI-24 HIND. It was designed to be a multi-purpose helicopter, essentially, combining the utility and attack functions of the UH-1 and AH-1. It was, however, optimized for the attack role. By 1976, the HIND evolved into the HIND-D and by 1978 the HIND-E, both formidable attack helicopters. Following "the Yom Kippur War, the Soviets emphasized the crucial significance of the co-operation between the tank and the helicopter..."(6) The Soviets viewed the HIND as a primary system to destroy enemy ATGM's

and protect Soviet combined arms formations. Also in 1978, the Soviet attack helicopter was "perceived as a means to extend the scope and pace of the conduct of operational level land military operations."(7) This concept gave the attack helicopter a broader doctrinal base, eventually, leading to its acceptance as a primary tactical level combat system.

In 1975, the U.S. Army began the Advanced Attack Helicopter (AAH) program. Hughes Helicopter Corporation won the competitive fly-offs and produced the AH-64 Apache, which is being fielded today. The AH-64 is an excellent attack helicopter equipped with sophisticated target acquisition and night vision systems. Its ability to operate at night and during limited visibility makes it a very desirable weapon system for the European battlefield. The Hellfire antitank guided missile system is versatile and deadly. Battlefield laser systems, either mounted on other helicopters or ground-based, can be used to designate targets for the AH-64. This feature allows the Apache to launch its missiles from covered locations or to seek cover immediately after firing. The Apache is currently the world's most advanced attack helicopter, but it is expensive and the Army intends to procure only about 500 aircraft. Meanwhile, the Cobra loses ground each day. The future Light Helicopter Program (LHX), our next technological step, remains but a vision for the 1990's.

The Soviets continue to improve the HIND and are developing specialized attack helicopters. The MI-26 HAVOC

and the KA-? HOKUM, are two such systems. The HAVOC is optimized for the antitank role with an air combat capability and will probably be fielded in 1986.(8) The HOKUM has two counter-rotating rotors which have been optimized for speed and maneuverability.(9) It "... is expected to give the Soviets a significant rotory-wing air-to-air combat capability."(10)

Since the early 1960's, the Soviets have watched and learned a great deal about attack helicopters and their employment from U.S. success and failure. By 1978, the Soviets had learned enough to make their own decisions on future employment of attack helicopters. It seems clear that they made an early decision to fully integrate the attack helicopter into the land battle. Its inherent speed, flexibility and lethality made it a natural partner for Soviet high tempo offensive operations.

In conclusion, "the growing significance of the Soviet helicopter as a crucial . . . component of . . . [the] battlefield has brought about the emergence of an integrated family of helicopter type refined for specific, dedicated missions."(11) The HAVOC will focus on the destruction of U.S. armor while the HOKUM destroys U.S. attack helicopters and sub-sonic CAS aircraft. As a result, the lead the U.S. recently enjoyed in numerical and technological superiority and the innovative tactical employment doctrine of attack helicopters is in jeopardy or no longer exists. The Soviets, as a minimum, have achieved parity in attack helicopter technology and employment.

SECTION III

CURRENT SOVIET ATTACK HELICOPTERS

Tactical Organizations

Since at least 1978, Soviet military forces have been undergoing major changes which reflect a "shift in strategic emphasis from nuclear to conventional warfare."(12) The Soviets envision that their rapidly advancing conventional forces can cause the collapse of inferior NATO forces. This shift in doctrine has hastened tactical integration of attack helicopters on the Soviet conventional battlefield. The Soviet Air Force, to which all Soviet helicopters belong, is currently being reorganized to facilitate better utilization of combat helicopters in support of Soviet land forces. Each combined arms and tank army has been given operational control of an independent combat helicopter regiment. Also, each motorized rifle and tank division has operational control of one general purpose helicopter squadron.

This unprecedented effort to decentralize air force assets below front level gives the Soviet ground commander access to powerful and mobile attack helicopter assets. For example, "a flight of 2 MI24 HIND's and 2 MI-8 HIP's is capable of loosing off about 8 tons of ammunition in a

matter of seconds."'(13) Two HINDs can also launch eight fast and deadly AT-6 spiral ATGM. Every army commander has in his attack regiment two squadrons of HIND D/E's, each squadron having twenty helicopters. Division commanders have at least six HINDS D/E's in their general purpose squadron. Additionally, twenty HIP's at army and six at division are also available for armed attack. These are normally used as assault helicopters and, therefore, are not considered for purposes of this discussion as attack helicopters. The result of Soviet Air Force reorganization is that the tactical commander in a division could have available forty or more HIND's at any one time to attack enemy armor, ATGM's and helicopters.

Doctrine for Tactical Employment

Soviet combined arms doctrine states that "the helicopter is one of the main weapons for the practical implementation of the offensive tactical concept for seizing the ground."(14) Obviously, the Soviets view it as an integral part of combined arms operations. Its speed, flexibility and firepower complement the tempo of the Soviet attack. Additionally, the attack helicopter is seen doctrinally as the ideal system to provide security and firepower for operations into the enemy's rear. This can occur during exploitation of offensive success, pursuit or while operating as part of an OMG or forward detachment.

Finally, the attack helicopter is seen as an excellent system to defeat enemy attacks against Soviet rear services. Again, firepower and responsiveness are the key advantages of the attack helicopter. Soviet doctrine for the tactical employment of the attack helicopter appears to be on very solid ground. The Soviets have not had any difficulty integrating an air force asset into land force combined arms operations. They simply focused on the mission and decided how each arm could best contribute to mission success. Parochial interests have been subjugated in the interest of combined arms goals. A senior Soviet officer summarized the current doctrinal outlook on attack helicopters by stating, "the attack helicopter will probably have as great an impact in some future war as the tank had in the last great war."(15)

Tactical Missions of Soviet Attack Helicopters

The basic tactical missions performed by Soviet attack helicopters can be categorized as close-air support, support to operations in an enemy's rear and support for the offensive.(16) These missions form the basis for more specific, functionalized missions within each operation.

Close Air Support (CAS) is performed by divisional and army attack helicopters to support Soviet tactical forces in contact. Generally, they augment artillery fires in defensive situations and may even replace artillery in a

fast-paced offensive operations. CAS has traditionally been carried out by fixed-wing aircraft; however, in the Soviet Army, helicopters "are preferred to fixed-wing aircraft."(17)

Attack helicopter support for an airmobile operation into an enemy's rear consists of armed escort for aviation assault assets and fire support for combat forces. The attack helicopter is viewed by the Soviets "as an ideal means of transporting... forces into the enemy's rear and of providing fire support both enroute to and in the landing zone."(18)

Attack helicopters support the fire support plan for offensive operations with "three types of helicopter support; preparatory (podgotovka) which is preplanned fire delivered before the attack is launched; close support (podderzhka) when fire is delivered during the attack; and accompaniment (soprovozhdenie) in which the helicopter accompanies the unit to the depth of the enemies (sic) defense."(19) Finally, the attack helicopter can temporarily assume the role of either the tank or artillery to ensure that the tempo of the attack is gained or maintained. Attack helicopters are also expected to be capable of "helicopter combat with every prospect of success."(20)

Tactics

Soviet attack helicopters generally conform to standard

tactics when conducting attack missions. For example, the basic flying unit for attack helicopters is four aircraft while the basic fighting unit is two. In preparation for CAS and antitank missions, fighting units will displace forward from their primary airfield or field site to attack (loiter) positions just out of enemy artillery range. They will receive their mission, perform necessary final planning and proceed toward the target on routes coordinated with supported ground forces. Enroute, the attacking team will fly at high airspeed and wherever possible, maintain terrain masking. At a predesignated location, the team will make contact with the appropriate air force forward air controller [FAC]. The controller then coordinates the attack with on-going artillery fires, other CAS operations and activities of supported forces. At three to five kilometers from the target the attacking team will execute a sharp climb (pop-up maneuver) to between twenty and one hundred meters. While in a shallow descent, ATGM's are fired and tracked to impact. If rockets and guns are not employed, the team will immediately descend to terrain flight and execute a sharp right or left breakaway from the target area. The team can then return to the coordination point for further attacks or initiate a new attack from another location as designated by the FAC. If enemy opposition is light, attacking teams might climb to twenty to one hundred meters and fly toward the target maintaining high airspeed and level flight (running fire technique). ATGM's are again fired between three to five kilometers

followed by rockets at 1500 meters and cannon at one kilometer. Teams can reattack from a new direction to reduce vulnerability or simply fly in a large circle and repeat the previous engagement.(21) Hover fire is not currently a normal delivery technique used by Soviet attack helicopters. However, fires from a hover or at slow forward airspeed permit very accurate antitank fires. As the Soviets gain experience and field new systems, the use of modified hover fire will probably become an accepted Soviet delivery technique.

Soviet helicopter operations at night are of "increasing importance because Army operations are becoming more prevalent."(22) The use of night vision goggles, navigation aids, low light T.V., flares from artillery, and white light illumination from other helicopters allow Soviet helicopter crews to conduct effective combat operations at night. The helicopter is expected to be able to destroy attacking enemy tanks or infantry fighting vehicles (IFV's), to counter enemy attacks in rear areas and to attack the enemy as part of larger offensive operations at night.(23) Finally, the Soviet attack helicopter can and does operate in marginal weather. Acquisition and weapons range limitations lessen its overall effectiveness, but, it will probably continue to fight as part of the combined arms force until weather conditions prevent safe flight.

MI 24 HIND E Characteristics and Limitations(24)

The Soviets have produced over 1500 models of the MI-24 HIND. The HIND E has been produced at Rostov and Arsenyev at the rate of fifteen helicopters per month since 1981. The HIND is comparable in size to the UH-60A. It is powered by two 2,200 shaft horsepower turbines and can lift eight troops, a crew of four and 3,000 pounds of assorted armament. The HIND consumes 800 pounds of JP4 an hour [120 gallons] giving it a usable range of two hours or 385 nautical miles with full armament. It is a fast helicopter rated at 160 knots cruise and 184 knots maximum speed at sea level.

The HIND is also quite heavily armored and, therefore, highly survivable. The canopy is bullet resistant on front facing surfaces, and the tandem pilot and co-pilot seats are armored. Titaniam and steel are substituted for aluminum on critical components. Dual or redundant electrical and hydraulic systems, self-sealing fuel tanks and fiberglass rotor blades with exceptional anti-ballistic characteristics are also built into every HIND E. It is believed that the HIND E has an exhaust gas suppressor and turbine baffles to dramatically lower its IR and acoustic signatures. Additionally, the HIND E has a radar warning device, possible chaff dispensers and an IFF capability.

The armament, acquisition and fire control systems of

the HIND E are sophisticated and effective. The HIND E can launch four tube-launched AT-6 Spiral antitank guided missiles. The AT-6 can travel 5 kilometers in 10 seconds and has a range of at least 7 kilometers. Because of its range and speed, "the AT-6 stands as the most prominent ATGM fielded in the world."(25) Additionally, "the AT-6 can be used in the antihelicopter role."(26). The HIND E has a twin-barrel 23 mm cannon mounted on the starboard side of its fuselage. This cannon replaces the 12.7 mm nose turret and flexible gun on the HIND D. There is some speculation that the fixed cannon on the HIND E will prove ineffective in antihelicopter and CAS operations and force the Soviets to return to a flexible gun system. Although seldom used, hardpoints on the stub wings of the HIND E can accomodate bombs. The two inboard points can each carry 500 kilograms while the outboard points can handle 250 kilograms. Four 57 mm unguided rocket pods, each carrying 32 rockets, can also be hung from the HIND's wings. The 57mm unguided rocket has an effective range of 1500 meters and is employed against area type targets, usually troops, buildings and light skinned vehicles. The HIND fire control system includes a heads-up display (HUD), a laser range finder, electro-optical sights, low light television and radar. The HIND is fully equipped for instrumented flight. Passive night vision or possibly, a first generation thermal imaging system might be part of the HIND's acquisition and fire control system. The HIND uses HF and VHF radios.

Maintenance and logistics procedures for a HIND unit

are centralized and characterized by fixed base operations. Maintenance at the crew chief level is performed by an officer or warrant officer, while higher level maintenance is performed by air force maintenance detachments. The helicopters are generally staged from airfields or improved field sites well behind the forward edge of the battle area and definitely beyond enemy artillery range. If a HIND requires extensive repairs, it is usually returned to Front or higher level and a "float" is provided back to the tactical unit. Forward area refueling and rearming point (FARRP) operations are likewise centralized and generally lack the flexibility associated with U.S. Army FARRP operations. Mobile tactical FARRP's are not used. Rearming and refueling are generally done on a large scale at fixed based locations.

Employment limitations of the HIND E fall into two basic categories, those dictated by the basic design and those induced by the men operating the machine. Physically, the HIND is a powerful, tough, relatively simple, fast and effective helicopter; however, design limitations do exist. For example, the large stub wings on the HIND make it a difficult helicopter to hover. The wings, designed to stabilize the large rotor system during forward flight, disturb the helicopter's downwash pattern at a hover. Therefore, the HIND probably hovers with marked instability. This may be one reason why the Soviets have not adopted U.S. style antitank tactics employing hover fire. Slight forward movement gives the HIND necessary stability, possibly

explaining the Soviet preference for pop-up and running fire delivery techniques.

The current version of the AT-6 must be terminally guided to the target. Therefore, the HIND does not have a fire and forget ATGM and must remain exposed while firing the AT-6. At five kilometers this will require the HIND to be exposed for about fifteen seconds (five seconds to acquire target, and ten to track the missile). 57mm rockets are area fire weapons and are effective to only 1500 meters as compared to the U.S. 2.75 inch rocket which has a range of 6000 meters. Finally, the 23 mm cannon is fixed on the starboard side of the helicopter. The nose of the HIND-E must be pointed at the target before any engagement. Interestingly the 23mm cannon is the same one used on the MIG 21 for air-to-air encounters. The probability of the HIND-E having a sophisticated night vision targeting device is very unlikely at this time. Soviet pilots can fly under goggles from point A to B; however, targeting can not be accomplished unless some type of artificial illumination is provided.

The tendency to centralize maintenance facilities at higher echelons will decrease the flexibility of attack units. Soviet attack units do not operate from austere forward field sites. This may result in an inability to respond quickly to rapidly changing tactical situations. Finally, the HIND requires approximately 45 minutes to refuel and arm. Therefore, quick turn arounds in support of combat forces may not be possible.

Soviet pilots, like our own, have varying talent and experience; however, a generation of Soviet attack helicopter pilots are gaining invaluable combat experience in Afghanistan. As one close observer of Soviet military activity in Afghanistan notes, "the future Soviet Air Force will be led by a group of officers who not only accumulated their combat experience in Afghanistan, but were hardened by the harsh and spartan conditions there.(27)

Developmental Trends

Historically the Soviets have centralized air force assets at the front level. A recent major review of that policy, prompted by "the nuclear threat, better communications, . . . [and] recognition of helicopter capabilities"(28) has resulted in the decentralization of helicopter assets to the army and division level. The decentralization of helicopter assets is a major shift in Soviet attack helicopter doctrine which will have a long term effect on Soviet combat operations. John Everett-Heath, a noted Soviet analyst, recently stated, "as the capabilities of Soviet attack helicopters have grown, so has the doctrine for their employment come under closer scrutiny... The already formidable impact they can make on the battlefield can only be enhanced as they increase in numbers and improve in quality."(29)

The Soviets have recently begun to investigate the utility of special purpose helicopters. The MI-28 HAVOC, which will probably be fielded in early 1986, is designed to be an improved antitank system, with all-weather and antihelicopter capability. The HAVOC will most likely be equipped with an improved AT-6 ATGM employing millimeter wave technology. The improved missile will be conventionally guided by laser or radio commands until the millimeter wave seeker locks the missile onto the target at a specific range. From that point on, the missile requires no further guidance commands. Also, the MI-28 might be armed with a modified SA-14 air-to-air missile. This six kilometer missile uses pulse radar to acquire and hit aerial targets such as enemy attack helicopters and sub-sonic fixed wing CAS aircraft. If the MI-28 is equipped with a modified fire and forget ATGM and air-to-air missiles, it will be a formidable foe for the AH-64.(30) Finally, the Soviets have another helicopter in testing at this time, the HOKUM. It appears to be the fastest, and possibly the most maneuverable of all Soviet helicopters. It features counter-rotating rotors which negates the need for a tail rotor system and provides excellent speed and maneuver characteristics. Given its high speed, possibly 350 kilometer per hour, and high maneuverability, the HOKUM will most likely be optimized as an antihelicopter system with antitank capability.(31)

SECTION IV

ANALYSIS: DOCTRINAL IMPLICATIONS OF THE SOVIET ATTACK HELICOPTER ON U.S. ARMY DIVISION OPERATIONS

Soviet commanders have made the decision to integrate the helicopter down to tactical level to develop and maintain the momentum and tempo of the Soviet attack. As the result of that decision, "the Soviet helicopter has assumed a new importance on the battlefield and will be used for a greater variety of missions."(32) Numerical superiority, a speed and payload advantage, excellent survivability from small arms fire and lethal ATGM's, cannons, bombs and rocket systems make the Soviet attack helicopter a dangerous opponent. In response to this major shift in Soviet tactical doctrine, several questions should be asked. First, are U.S. tactical units prepared to engage and defeat this critical element in Soviet combined arms operations? What are the implications for a U.S. Army division's ability to conduct close, deep and rear combat operations? Does current division and brigade doctrine adequately address the Soviet attack helicopter as part of Soviet combined arms operations? And, finally, do our schools and major training sites such as the National Training Center (NTC) prepare Army units to defeat the Soviet attack helicopter? These questions will be analyzed in the following paragraphs.

Inasmuch as the Soviets have decided to use the attack helicopter as their primary CAS aircraft, the possibility that a U.S. Army tanker, aviator or infantryman will see the HIND whenever and wherever contact is made with Soviet forces is very likely. The attack helicopters of the division and army will perform routine CAS for Soviet ground forces. CAS during the day will generally be performed by pairs of attacking helicopters. They will approach the target area using terrain flight techniques until reaching a point coordinated with a ground FAC [3-5 km from the target]. They will pop-up and fire ATGM's, followed by rockets, then cannons. While pairs attack from one direction, other pairs can be phased into the attack. Direction of attack, speed and altitude will be varied. At night, CAS will generally be done under illumination. However, if the Soviet attack helicopter can acquire and fire using on-board night systems, then firing will most likely be accomplished at slow forward airspeed (modified hover fire) from locations over the heads of friendly troops.

The delivery of accurate antitank fires is an extremely important mission for the Soviet attack helicopter. The division's HIND's and those made available to the divisions from army-level, will engage U.S. Army armor and mechanized infantry formations. The methods of delivery will be similar to those used for CAS; however, the air force FAC may or may not be directly involved. ATGM's will be employed at maximum stand off ranges and rocket and cannon

fire will not normally be employed as part of an antitank mission. Additionally, U.S. helicopters and ground ATGM's operating near the FEBA are prime targets for the Soviet attack helicopter. The Soviets place special emphasis on the destruction of enemy antitank systems and these will be targeted by attack helicopters during either antitank or CAS missions. In summary, the Soviet attack helicopter has replaced fixed wing aircraft as the preferred CAS system. It performs a key antitank role and is instrumental in the defeat of enemy ATGM's, both air and ground systems. The Soviet attack helicopter is a critical combat asset opposing U.S. Army division close combat operations.

Soviet attack helicopters will also counter U.S. deep operations. Speed and firepower make the attack helicopter the ideal weapon system to counter U.S. deep operations. It can be assumed that the Soviets have interpreted U.S. Airland Battle Doctrine and that they will keep attack helicopters ready to respond against expected enemy deep combat operations.

Soviet doctrine places great importance on the destruction of enemy rear services. They will attack our rear areas using ground or airmobile assault forces. Furthermore, they will attack by day and night, "as much as twenty to thirty kilometers forward of the forward edge of the battle area."(33) During an airmobile attack HIP helicopters will carry soldiers and their equipment while HIND's provide escort protection. Also, HIND's might insert teams of six to eight troops equipped with shoulder fired

surface-to-air missiles and ATGM's around landing zones in overwatch positions. The teams are then protected by HINDs which remain close by.(34) U.S. combat forces moving to attack the airmobile force become excellent targets for loitering HINDs and the air defense/ATGM teams. In the daytime, HINDs will employ running fire and pop-up techniques when protecting troops in landing zones. If U.S. attack helicopters arrive on the scene, the HIND will employ the AT-6 at ranges beyond two kilometers or use his cannon or rockets if ranges are between 1000 - 1500 meters. At night, artillery and 57mm rocket flares will be fired over enemy troops, and the HIND will support the airmobile force with running fire or modifed hover fire. The Soviet attack helicopter will play a key role in a Soviet attack into a U.S. division rear area. Escort, fire support, antitank and CAS will be provided by the attack helicopter.

U.S. Army division and brigade doctrinal manuals do not adequately address the potential of the Soviet attack helicopter as part of the Soviet combined arms threat. For example, FC 71-100, Armored and Mechanized Division and Brigade Operations discusses Soviet attack helicopters twice. The Soviet attack helicoter is listed as a strength within the Soviet military and it is identified as a potentially dangerous foe of U.S. Army aviation. Throughout the remainder of the manual nothing is mentioned about the Soviet attack helicopter's threat to divisional close, rear or deep operations. FC 71-101, Light Infantry Division Operations, contains no discussion about Soviet attack

helicopters. Some discussion should occur even though the Soviet attack helicopter threat may be less under conditions normally prevalent when employing light forces. FC 71-3J, coordinating draft October 1985, Armored and Mechanized Brigade Operations, does a little better than the two divisional manuals in that it mentions Soviet attack helicopters approximately eight times. The manual observes that Soviet ground forces in the attack will be supported by attack helicopters. Additionally, several references are keyed to discussions about air defense procedures to counter the Soviet atack helicopter. FC 1-111, Combat Aviation Brigade, identifies the Soviet attack helicopter as a threat to aviation. It does not adequately identify it as a threat to the rest of the combined arms force.

The limited information currently found in U.S. Army division and brigade doctrinal manuals about Soviet attack helicopters does not provide our schools with sufficient information to develop adequate training curricula. For example, at the Command and General Staff College (CGSC) the impact of Soviet attack helicopters on close, deep and rear operations during corps and division exercises is often ignored or inadequately portrayed. On the other hand, the U.S. tactical units often use corps and division combat aviation brigade attack helicopters to destroy massed Soviet armor in close operations, to protect a rear area unit from a Soviet company airmobile assault or to drive deep into the Soviet rear area to destroy critical counterattack forces. Seldom do similar considerations for Soviet attack

helicopters enter into the scenario. Doctrinal shortcomings deny U.S. students the opportunity to grapple with difficult tactical situations generated by a realistic Soviet attack helicopter threat.

The National Training Center is making a major effort to field a Soviet helicopter threat force. Leaders at the NTC have recognized that the Soviet threat operations are incomplete without Soviet attack and assault helicopters. The new unit will allow U.S. forces to encounter Soviet attack helicopters as part of a Soviet combined arms force. Unless all enemy arms are present on the battlefield, the NTC cannot effectively exercise combat units. Ideas similar to those at the NTC must be applied to all division and below field training exercises where aggressor forces are employed.

Finally, several U.S. Army divisions have recognized the serious threat posed by Soviet attack helicopters. Internally generated efforts to reduce vulnerability include firing main gun engagements at helicopter silhouettes during tank gunnery, developing air watch SOP's for unit movement, initiating formal air-to-air training programs for combat aviation brigade crews and correctly identifying the Soviet threat in combat SOP's. These admirable efforts fall short of the mark. Divisions view the Soviet attack helicopter threat from perspectives unique to their particular theater and experience. Consistent, combined arms solutions to counter the Soviet helicopter as part of a Soviet combat operation are not being developed by field units.

SECTION V

CONCLUSIONS AND RECOMMENDATIONS

The Soviet attack helicopter, operating alone or as part of a Soviet combined arms operation, will dramatically affect the close, rear and deep operations of a U.S. Army division. U.S. tactical forces are not prepared to counter the new Soviet threat. As such, a major revision of U.S. Army division how-to-fight doctrine is necessary. Once, developed, the new tactical doctrine must be the basis for long term technological development and must provide the framework for our training and education systems. Most important, the new tactical doctrine must be developed based on the concepts of combined arms operations.

In the area of combined arms doctrine, we can learn much from the Soviets. For example, the U.S. is currently struggling with the addition of a combat aviation brigade in each combat division and corps. The brigade is to some a maneuver headquarters, to others a combat support headquarters, and to still others a bad decision. The Soviet Army has successfully taken operational control of air force assets and placed a general purpose helicopter squadron at the division level and an attack helicopter regiment at the army level. Rather than worrying about such things as whether their helicopters are maneuver or combat support forces, the Soviets see their helicopters as another

critical combat asset which must be integrated into combat operations. As a fully integrated member of a combined arms force, the helicopter carries out roles which enable the Soviets to achieve and maintain the initiative. The Soviets do not view the battlefield as a place where any one combat system can operate autonomously. Total cooperation is necessary to achieve victory. If U.S. Army doctrine were founded on similar principles, artillery, ADA, armor, infantry, supporting CAS and our own attack helicopters would be properly positioned, task organized and armed to defeat any Soviet combined arms force.

New combined arms doctrine must accurately portray the attack helicopter as a vital part of Soviet combined arms operations. This will help ensure that aggressor forces, such as the one at the NTC, are realistically organized. Our forces must repeatedly face the Soviet attack helicopter threat during close, deep and rear operations. Only through realistic and hard training can we develop new tactics and the necessary teamwork to defeat the enemy.

The new doctrine must also send a clear signal through the U.S. Army that parochial interests can no longer be tolerated. The combined arms mission at hand must be the focus for all U.S. Army tactical units. Additionally, the new doctrine must be adaptable and constantly reviewed. We cannot afford to allow a threat similar to the Soviet attack helicopter to surprise us in the future.

In conclusion, the Soviet attack helicopter is a vital and fully integrated member of the Soviet combined arms

force. Chris Donnelly's observation that "it is the helicopter, above all in Soviet eyes, which offers the scope for exploiting... characteristics of the modern battlefield to the full"(35) is right on the mark. We can expect the Soviets to continue to improve their attack helicopters, to employ them extensively at the tactical level and to apply valuable combat lessons from Afghanistan to future doctrine and tactics. The Soviet attack helicopter will impact upon the successful conduct of U.S. Army division close, deep and rear tactical operations, and if ignored, could very likely be a decisive factor for Soviet victory on future battlefields. This can be precluded if, as serious students of war, we address the deficiencies of current combined arms doctrine.

Division and brigade doctrine must be changed to include the Soviet attack helicopter threat. We must develop effective combined arms tactics. Armor, aviation, infantry, artillery, air defense artillery, and engineers must all work together to do their part in defeating this new and dangerous enemy. Our education system must teach the new doctrine, and we must practice it during integrated combined arms training exrcises. Only then will U.S. Army divisions be able to conduct successful close, deep and rear operations as envisioned by Airland Battle doctrine. Initiative, agility, depth and synchronization will not be attainable on future battefields if we allow the enemy the unchallenged opportunity to exploit the potential of his attack helicopter.

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